IN THE SPECIFICATION

In the original specification as filed, please amend the paragraph starting at page 1, line 9, as follows:

A process for producing components from superimposed resin-impregnated mats consisting of reinforced-reinforced plastics, SMCs, is known from DE 199 49 318 A1. To begin with, the resin-impregnated mats with unidirectional fiber orientation are wound as semi-finished products onto rolls. In the course of the production of a component, individual strips for the structure of a layer of the component are each severed, in varying lengths and with varying directions of cut relative to the run of the fibers, from a roll of semi-finished product or from several rolls of semi-finished product. The strips are juxtaposed with a particular fiber orientation, according to the shape and size of the component. Subsequently, by superimposing the strip sections of varying length, a laminated preform having varying orientations of the individual layers in relation to the loading to be expected is formed and then inserted into a tool and shaped out into a component by pressing so that the material is in a flowable consistency and adapts to the contour of the form ~~extrusion~~. Because several superimposed layers with appropriate fiber orientations are required for an optimal design of the component, the structure of a laminate is very complex. Depending on the stress demands arising and on the size of a component, more than five individual layers may be required for an optimal structural design of a component. Relatively large bodywork parts of an automobile - such as doors or engine-compartment and luggage-compartment covers, for example - may then consist of more than a hundred and fifty individual strips, representing a considerable effort in terms of time in the course of laying.

In the original specification as filed, please amend the paragraph beginning at page 3, line 1, as follows:

In the known resin-impregnated mats the reinforcement consists of unidirectionally aligned fibers, aligned in the longitudinal direction of the mat, and also, where appropriate, additionally of short fibers in a random-laid layer. For the production of a component, therefore, for each direction of loading the blanks have to be laid with an orientation of the fibers corresponding to the loading in the component. In the case of the invention, on the other hand, the fibers that constitute the essential element of the reinforcement are already arranged in such a way that they run in a direction in which the forces acting on the component take effect. Production of the mats according to the invention is undertaken, in principle, as in the case of the conventional mats. The fibers, which are firstly introduced into the textile structure in the form of virtually endless fibers - that is to say, threads - are laid in such a way that the fibers in the textile structure intersect at a previously defined angle. The run of the fibers is substantially adapted to the course of the loading to be expected. In the case of shear stresses, for example, an angle of intersection of the fibers of 45 degrees is advantageous. As a rule, fibers in a different alignment, preferably in the longitudinal direction of the webs, are added and form the non-woven-fabric reinforcement. The superimposed fibers - both the unidirectionally aligned fibers, fibers running in the longitudinal direction of the mat, and the intersecting fibers - may be joined to one another at their points of intersection by means of processes that are matched to their respective material, for example by gluing, fusing or sewing. The customary materials for reinforced-reinforced plastics, for example glass, carbon, aramide or HD polyethylene (HD = high-density), are used as materials for the fibers. As in the case of the conventional fiber mats, the reinforced-reinforced plastic composition located between two backing films firstly passes

through a fulling zone for the purpose of impregnating the reinforcing fibers. Subsequently the material is cut into strips, wound onto rolls and transported in the form of semi-finished product into a maturing warehouse. After the requisite thickening of the semi-finished product has been attained, cutting of the quasi-endless fibers, the threads, into fibers of finite length is undertaken, in order to make the mats suitable for pressing so that the material is in a flowable consistency and adapts to the contour of the form ~~extrusion~~.

In the original specification as filed, please amend the paragraph beginning at page 6, line 1, as follows:

After passing through the fulling zones 27, symbolized by rollers, for the purpose of impregnating the reinforcement 2, the resin-impregnated mat 26 according to the invention is wound in its entire width as a semi-finished product onto a roll 28, as indicated by the arrow 29. But the resin-impregnated mat may also be cut lengthways beforehand into narrower strips, and the individual strips may each be wound onto a roll. The fully wound rolls are transported into a maturing warehouse. After maturing, in the case of the resin-impregnated mats according to the invention - as in the case of the conventional resin-impregnated mats - the "quasi-endless" fibers, the threads, are cut into pieces in order to make the resin-impregnated mats suitable for ~~the~~ pressing so that the material is in a flowable consistency and adapts to the contour of the form ~~extrusion process~~.

In the original specification as filed, please amend the paragraph beginning at 6, line 16, as follows:

A longitudinal section - that is to say, a section extending in the winding direction 29 - through a resin-impregnated mat 26 according to the invention is represented on an enlarged scale in Figure 2. In the present exemplary embodiment the layer of random fibers 16 is absent. Parallel fibers 6 arranged in the longitudinal direction are situated on the backing film 10. Situated above them is a layer of fibers 4 formed from fibers 4o and 4u intersecting, in the present exemplary embodiment, at an angle of intersection 30 of 80 degrees, which therefore include the complementary angle 31 and 32, respectively, to the perpendicular 33 to the winding direction 29, as the top view, drawn out of the mat, of the point of intersection of two fibers 4o and 4u shows. Situated above the intersecting fibers 4o and 4u is a further layer of fibers 5, likewise arranged parallel and in the longitudinal direction - that is to say, in the winding direction 29. In the present exemplary embodiment the fibers 5 and 6 and also the fibers 4o and 4u intersecting diagonally are produced from carbon fibers and jointly form the non-woven-fabric reinforcement 2. The fibers of the non-woven-fabric reinforcement 2 are embedded in a resin/filler mixture 15. The resin-impregnated mat 26 is covered by the covering film 21 which has been coated by doctor blade on its underside with a thermosetting plastic 22. As is evident from Figure 2, at the separation points 34, in particular of the fibers 5 and 6, the fibers have been cut into sections of approximately equal length, in order to prepare the resin-impregnated mat 26 for the pressing ~~extrusion~~ process.

In the original specification as filed, please amend the paragraph starting at page 9, line 14, as follows:

The process sequence that has been described is repeated until such time as the requisite number of blanks 58 have been deposited on the male die 63. Then, controlled by the computer 56, the press 62 can be closed, by the female die 64 which is indicated being lowered onto the male die 63 in the direction of the arrow 65 and by the pressing ~~extrusion~~ operation which is known as such for shaping the workpiece being carried out. After the workpiece has been shaped out it can also be taken out of the press 62 by the handling device 59, this not being represented here.